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**REMARKS**

Claims 1-26, 30, and 39-41, as amended, and new claims 43-47 are pending in this application. In this Response, Applicants have amended certain claims. In light of the Office Action, Applicants believe these amendments serve a useful clarification purpose, and are desirable for clarification purposes, independent of patentability. Accordingly, Applicants respectfully submit that the claim amendments do not limit the range of any permissible equivalents.

In particular, independent claims 24, 30, and 39 have been rewritten to further clarify the embodiments of the present invention recited therein. Various dependent claims have been rewritten or canceled to maintain consistency with the language now recited in the independent claims. As no new matter has been added, Applicants respectfully request entry of these amendments at this time.

**ALLOWABLE SUBJECT MATTER**

Applicants appreciate the Examiner's recognition of allowable subject matter in claims 28, 32, and 41. In response, claims 24, 30, and 39 have been rewritten to include the subject matter previously recited in these claims.

**THE REJECTIONS UNDER 35 U.S.C. § 103*****The Combination of Shimosaka and Lucas Does Not Suggest the Present Invention***

Claims 1, 2, 4, 18, and 19 were rejected under 35 U.S.C. § 103(a) as being anticipated by U.S. Patent No. 5,816,937 to Shimosaka *et al.* in view of U.S. Patent No. 5,866,258 to Lucas for the reasons stated on page 2 of the Office Action. This combination of references does not render obvious the rejected claims for the reasons that follow.

As recognized by the Examiner, Shimosaka does not disclose or even suggest interpenetrating polymer networks (IPNs). In an attempt to remedy this deficiency, the Examiner relies on Lucas and its disclosure of self-crosslinkable IPNs. However, a skilled artisan would have lacked any motivation to combine Shimosaka and Lucas (absent the present invention to use as a template) to arrive at the present invention. In addition, one of ordinary skill in the art would have had no reasonable expectation of success that the use of a Lucas IPN would produce the stated objective of Shimosaka.

Shimosaka's use of polyurethane in the cover innermost layer (Col. 2, lines 62-65), cover intermediate layer (Col. 3, lines 36-38), or cover outermost layer (Col. 3, lines 39-43) is

intended to influence the initial velocity of the ball (when the core parameters are fixed). Col. 1, lines 47-49. For example, the inventors found that "better results are obtained when the cover innermost layer and cover outermost layer are softer than the cover intermediate layer . . . especially when the cover outermost layer has a Shore D hardness of less than 55 degrees, the cover innermost layer has a Shore D hardness of less than 55 degrees, and the cover intermediate layer or the inside one of the cover intermediate layers has a Shore D hardness of not less than 55 degrees." Col. 1, lines 50-60. Specifically, Shimosaka teaches a construction where the harder intermediate cover layer plays the role of gaining an initial velocity enough to increase the flight distance while the softer innermost and outermost cover layers provide for a better feeling. Col. 1, lines 60-63. As stated above, Shimosaka is completely silent on the use of IPNs in any of the cover layers. In addition, Lucas is completely silent as to the use of the disclosed IPNs in golf balls.

Despite this silence, the Examiner's rationale for the cited combination is that a skilled artisan "would have found it obvious to have a layer covering the cover made of [a] polyurethane IPN, as taught by Lucas, in order to improve strength." Office Action at Page 2. However, Shimosaka's objectives are to achieve much more than improved strength. In fact, Shimosaka purportedly discloses a golf ball that has a "a pleasant soft feel . . . increased initial velocity upon driver shots . . . improved spin upon sand wedge shots, and [ease] of control upon approach shots." Col. 1, lines 25-29. As such, Shimosaka teaches a *specific* multilayer cover construction using *specific* materials having a *specific* parameters (*i.e.*, hardness, gage, arrangement, and material in order to achieve the desired golf ball. Col. 2, lines 24-28. A skilled artisan would not have been motivated to alter the disclosed layer materials of Shimosaka with the Lucas IPN to arrive at the present invention at least because of the risk of losing a portion of the optimal results achieved through Shimosaka's specialized construction.

In addition to the lack of motivation, there is also a lack of reasonable expectation of success. In fact, the use of a Lucas IPN in a cover layer of the Shimosaka ball would likely render the ball unusable for its intended purpose. For example, Lucas teaches aqueous dispersions of IPN compositions that are used as surface coatings and adhesives. Col. 10, lines 10-12. Those of ordinary skill in the art are well aware of the many differences between coating layers (and materials used to coating layers) and the structural cover layers taught by Shimosaka, including degree of hardness and gage. As such, a skilled artisan would have lacked any reasonable expectation of success in preserving the structural integrity purportedly

achieved by the Shimosaka multiple cover layer construction if a Lucas IPN were used in place of the disclosed cover layer materials.

For at least these reasons, Applicants respectfully submit that the combination of Shimosaka and Lucas does not disclose or suggest the invention presently recited in claims 1, 2, 4, 18, and 19. Thus, Applicants respectfully request reconsideration and withdrawal of the § 103 rejection based thereon.

**Kennedy and Frisch Do Not Render Obvious the Present Invention**

Claims 1-4, 8-17, 21-22, 24-27, 30-31, and 39-40 were rejected under 35 U.S.C. § 103(a) as being anticipated by U.S. Patent No. 6,290,614 to Kennedy III *et al.* in view of U.S. Patent No. 4,742,128 to Frisch *et al.* for the reasons stated on pages 2-4 of the Office Action. This combination does not disclose or even suggest the present invention for at least the reasons that follow.

First, Kennedy is silent as to the use of IPNs and Frisch is silent as to the use of the disclosed polymer alloy in golf balls. As such, a skilled artisan would have lacked any motivation to use the disclosed polymer alloy of Frisch in Kennedy's golf ball without the present invention to use as a template.

Second, the primary thrust of Kennedy is to circumvent the conventional methods of producing polyurethane covers, such as casting, which require a substantial amount of time and energy. Col. 1, lines 36-40. In particular, Kennedy teaches a method of making a cover by directly mixing an isocyanate and a polyol to form a polyurethane with a gel time of 30 seconds or less, in some cases 10 seconds or less. Col. 2, lines 6-18 and Col. 6, line 60 to Col. 7, line 31. In contrast, the process employed by Frisch to form an IPN appears to be more involved and, according to Frisch, "specific process reaction conditions" must be employed. Col. 6, lines 63-64. As such, even though the Frisch reference does generally suggest gel times ranging from 10 seconds to 60 minutes (Col. 24, lines 22-24), the lack of any further teaching in Frisch with regard to these "specific process reaction conditions" would not provide a skilled artisan any reasonable expectation of success that the use of an IPN in the Kennedy method would still satisfy Kennedy's stated objectives.

With regard to claims 10, 14, 16, and 22 (and those depending therefrom), in addition to the deficiencies discussed above, the combination of Kennedy and Frisch does not even suggest the additional IPN properties recited in these claims, *i.e.*, glass transition temperature,

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area under a melting endotherm, average phase size, and shear resistance rating. As such, only the present invention provides the requisite motivation for the cited combination.

With regard to independent claims 24, 30, and 39, Applicants respectfully submit that these claims are allowable at least because of the lack of disclosure by Kennedy and Frisch relating to IPNs formed using the specific materials now recited.

In light of the discussion above, Applicants respectfully submit that the § 103 rejection based on the combination of Kennedy and Frisch is overcome. Thus, Applicants respectfully request reconsideration and withdrawal of the rejection.

### CONCLUSION

All claims are believed to be in condition for allowance. If the Examiner believes that the present amendments still do not resolve all of the issues regarding patentability of the pending claims, Applicants invite the Examiner to contact the undersigned attorneys to discuss any remaining issues.

A Petition for Extension of Time is submitted herewith to extend the time for response two months to and including March 12, 2007. No other fees are believed to be due at this time. Should any fee be required, however, please charge such fee to Bingham McCutchen LLP Deposit Account No. 195127, Order No. 20002.0041.

Respectfully submitted,  
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